Principles of Algebra and Geometry Name_____

Final Exam Review Part 1

Date_____

Simplify each expression. Put each solution in standard form. State the degree and leading coefficient. State whether the polynomial is a monomial, binomial, trinomial, or polynomial with more than 3 terms.

1) $(2b + 3b^2 - 6b^4) - (3b^4 + 7b + 5b^2) + (b - 7b^2)$

$-9b^4 - 9b^2 - 4b$
Degree: 4
Leading Coefficient: -9
Trinomial

2) $(3n - 6 + 3n^2) - (3n - n^2 - 6) + (7n^2 - 2n)$

$11n^2 - 2n$
Degree: 2
Leading Coefficient: 11
Binomial

Find each product.

3) $4v(7v^2 + 6v - 5)$

$28v^3 + 24v^2 - 20v$

4) $7v^2(5v^2 + 7v - 8)$

$35v^4 + 49v^3 - 56v^2$

Solve each equation.

5) $7a + 7a = -2(-a - 4) + 2(8a + 2)$

$\{-3\}$

6) $4(7 + 2m) + 2(1 + 7m) = 2m + 5m$

$\{-2\}$

Find each product.

7) $(a - 6)(4a - 3)$

$4a^2 - 27a + 18$

8) $(3x - 2)(2x - 3)$

$6x^2 - 13x + 6$

9) $(4n + 8)(n^2 + 6n + 1)$

$4n^3 + 32n^2 + 52n + 8$

10) $(6x + 3)(5x^2 - 6x + 8)$

$30x^3 - 21x^2 + 30x + 24$

11) $(7r^2 - 2r + 1)(6r^2 - 7r + 3)$

$42r^4 - 61r^3 + 41r^2 - 13r + 3$

12) $(8 + 5k)(8 - 5k)$

$64 - 25k^2$

13) $(4k - 8)(4k + 8)$

$16k^2 - 64$

14) $(3x + 1)^2$

$9x^2 + 6x + 1$

15) $(7r - 6)^2$

$49r^2 - 84r + 36$